

Notice of Allowability

Application No.

10/804,714

Examiner

Terressa M. Boykin

Applicant(s)

ABAD ET AL.

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1-10-05.
2. ☒ The allowed claim(s) is/are 1-14,16-27.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Terressa M. Boykin
Terressa M. Boykin
Primary Examiner
Art Unit: 1711

Allowable Subject Matter

The following is an Examiner's statement of reasons for the indication of allowable subject matter:

Applicant(s) claimed invention is directed to a polycarbonate and method of making the polycarbonate having a low level of ionic species and residual monomers specifically chloride, sulfate, phosphate or combinations of ionic species thereof. Applicants amendment to claim 1 more clearly defines that the amount of ionic species present which are significantly below the amounts normally found in the prior art. This low amount of ionic species provides a resulting polycarbonate, which has excellent impact resistance, heat resistance and transparency. Applicants accomplish this by using a scavenger or quenching agent and subsequent devolatilization of unreacted organic compounds under specific vacuum conditions. The catalyst-quenching agent is introduced at a point in the process upstream of the last reactor or other agitation reactors under sufficient residence time and vacuum application, which further decrease the level of organic residuals in the polymer. Such has neither been anticipated by nor made obvious from the prior art.

For example, Brack discloses a method of purification via filtration of the polyester prepolymer from the resulting polycarbonate and not the residual ions themselves. The method comprises dissolving the polymer in a solvent and precipitating the polymer from the nonsolvent followed by filtration. Inoue discloses a method of removing impurities such as particular matter from bisphenol and carbonate acid diester using a fluorinated resin membrane filter but does not teach that filtration is used to remove

Art Unit: 1711

fluorinated resin membrane filter but does not teach that filtration is used to remove residual ions. This is significant since filtration alone does not produce levels of 0 to 100 ppb and not within the capability of filtration alone but again would require additional processing. Kageyama discloses the formation of polycarbonate which use combinations of basic compounds containing sulfur, nitrogen, phosphorus , or alkali metals as catalyst along with a radical scavenger and filtration. However, the particular methods of preparing polycarbonate comprising a dihydroxy aromatic compound having up to about 200ppb residual ions and the amount thereon is not disclosed. Lastly, Funakoshi discloses the reduction of the total of content of metal impurities with regard to iron but is silent to the method of preparing a polycarbonate comprising a dihydroxy aromatic compound having up to about 200 ppb residual ions as claimed, i.e. chloride, sulfate, phosphate).

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial

Art Unit: 1711

sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

**Examiner Terressa Boykin
Primary Examiner
Art Unit 1711**